

KLK8 (H-51): sc-292340

BACKGROUND

Kallikreins (KLKs) belong to the serine protease family of proteolytic enzymes. Kallikrein-8 (KLK8), also called neuropsin precursor, ovasin or serine protease 19, is a 260 amino acid secreted protein involved in hippocampal plasticity. Two isoforms exist for this protein. Isoform 1 is the primary form of KLK8 found predominantly in the pancreas. Isoform 2 contains an additional 46 amino acids after amino acid 23 and is predominantly expressed in adult brain and hippocampus. Isoform 2 is not common to the mouse homolog or other primate homologs. In humans, the T to A mutation (c.71-127T→A) leads to the splice variant seen in the human brain. Both isoforms are detected in fetal brain and placenta. In some cancer cells, KLK8 expression can suppress tumor cell invasiveness and lead to a favorable clinical outcome.

REFERENCES

1. Kishi, T., et al. 2002. Human kallikrein 8: immunoassay development and identification in tissue extracts and biological fluids. *Clin. Chem.* 49: 87-96.
2. Kishi, T., et al. 2003. Human kallikrein 8, a novel biomarker for ovarian carcinoma. *Cancer Res.* 63: 2771-2774.
3. Shigemasa, K., et al. 2004. Human kallikrein 8 (hK8/TADG-14) expression is associated with an early clinical stage and favorable prognosis in ovarian cancer. *Oncol. Rep.* 11: 1153-1159.
4. Kishi, T., et al. 2006. Activation and enzymatic characterization of recombinant human kallikrein 8. *Biol. Chem.* 387: 723-731.
5. Prezas, P., et al. 2006. The role of human tissue kallikreins 7 and 8 in intracranial malignancies. *Biol. Chem.* 387: 1607-1612.
6. Borgoño, C.A., et al. 2006. Human kallikrein 8 protein is a favorable prognostic marker in ovarian cancer. *Clin. Cancer Res.* 12: 1487-1493.
7. Sher, Y.P., et al. 2006. Human kallikrein 8 protease confers a favorable clinical outcome in non-small cell lung cancer by suppressing tumor cell invasiveness. *Cancer Res.* 66: 11763-11770.
8. Lu, Z.X., et al. 2007. A human-specific mutation leads to the origin of a novel splice form of neuropsin (KLK8), a gene involved in learning and memory. *Hum. Mutat.* 28: 978-984.
9. Kishibe, M., et al. 2007. Kallikrein 8 is involved in skin desquamation in cooperation with other kallikreins. *J. Biol. Chem.* 282: 5834-5841.

CHROMOSOMAL LOCATION

Genetic locus: KLK8 (human) mapping to 19q13.41.

SOURCE

KLK8 (H-51) is a rabbit polyclonal antibody raised against amino acids 72-122 mapping within an internal region of KLK8 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

KLK8 (H-51) is recommended for detection of KLK8 isoforms 1 and 2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for KLK8 siRNA (h): sc-41535, KLK8 shRNA Plasmid (h): sc-41535-SH and KLK8 shRNA (h) Lentiviral Particles: sc-41535-V.

Molecular Weight (predicted) of human KLK8 isoforms 1/2: 28/33 kDa.

Molecular Weight (predicted) of human KLK8 isoforms 3/4: 13/4 kDa.

Molecular Weight (predicted) of mouse KLK8: 29 kDa.

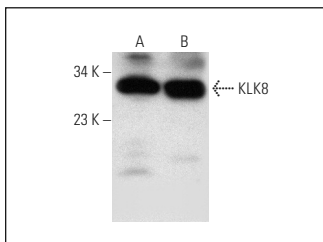
Molecular Weight (observed) of KLK8: 28-43 kDa.

Positive Controls: BT-20 cell lysate: sc-2223 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotting A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



KLK8 (H-51): sc-292340. Western blot analysis of KLK8 expression in Jurkat (A) and BT-20 (B) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.